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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/436,506	11/09/1999	THOMAS WILLIAM BISH	TU9-99-036	6740

24033 7590 01/15/2003

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EXAMINER

ALI, MOHAMMAD

ART UNIT PAPER NUMBER

2177

DATE MAILED: 01/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

06/436,506

Applicant(s)

FLUM, KEVIN B.

Examiner

Mohammad Ali

Art Unit

2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. This communication is responsive to application filed on November 09, 1999.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-9, 14-18, and 23-27 recites the limitation "third and fourth storage devices" in pages 14-20. There is insufficient antecedent basis for this limitation in the claim.

Claim Objections

3. Claim 22 is objected to because of the following informalities: The letter T does not mean anything in line 1. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

"A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person."

If this application currently names joint inventors, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary in considering patentability of the claims under 35 U.S.C. § 103. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

5. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al.

('Tanaka' hereinafter), US Patent 5,542,064, in view of Arnon et al. ('Arnon' hereinafter), US Patent 6,493,796 B1.

As to claim 1 Tanaka substantially discloses the claimed invention, including a data set one of two storage devices, each including a copy of the data set (col. 2, lines 41-47). Maintaining a flag for each storage device indicating whether an attempt of the data set from the storage device failed (col. 7, lines 4-7)

Consequently, Selecting the storage device having the flag indicating that no attempt failed if the flag for the other storage device indicates that one attempt of the data set from storage device failed (col. 7, lines 4-17). Finally, the claimed step of data set from the selected storage device is taught by Tanaka as the selecting storage units from the from the plurality of storage device (col. 2, lines 56-60).

Although Tanaka discloses accessing a data, which appear to be analogous to data set being copied one of two storage devices. However, Arnon discloses an analogous system wherein the table is accessible to the source storage system (col. 14, lines 19-26 et seq). It would have been obvious to one ordinary skill in the art of data storage devices accessing, at the time of the present invention, to combine the teachings of the cited references because the accessing a data set of Arnon system would have provided Tanaka's with the necessary infrastructure, which would allow accessing a data from multiple storage controlling devices, as explained in Arnon, col. 14, lines 19-26 et seq.

Claim 10 has same subject matter as of claim 1 and essentially rejected for same reasons as discussed in claim 1.

Although Tanaka discloses accessing a data, which appear to be analogous to data set being copied one of two storage devices. However, Arnon discloses an analogous system wherein the table is accessible to the source storage system (col. 14, lines 19-26 et seq). It would have been obvious to one ordinary skill in the art of data storage devices accessing, at the time of the present invention, to combine the teachings of the cited references because the accessing a data set of Arnon system would have provided Tanaka's with the necessary infrastructure, which would allow means for accessing a data from multiple storage controlling devices, as explained in Arnon, col. 14, lines 19-26 et seq.

Claim 19 has same subject matter as of claim 1 except 'computer readable storage media includes at least one computer program embedded' and Tanaka taught as the disk drive management table contains the disk drive number registration are for identifying disk drives at col. 6, lines 64-67 and essentially rejected for the same reasons as discussed in claim 1.

Although Tanaka discloses accessing a data, which appear to be analogous to data set being copied one of two storage devices. However, Arnon discloses an analogous system wherein the table is accessible to the source storage system (col. 14, lines 19-26 et seq). It would have been obvious to one ordinary skill in the art of data storage devices accessing, at the time of the present invention, to combine the teachings of the cited references because the accessing a data set of Arnon system would have provided Tanaka's with the necessary infrastructure, which would allow accessing a data from multiple storage controlling devices, as explained in Arnon, col. 14, lines 19-26 et seq.

As per claims 2, 11, and 20, the applicants' selection criteria for the first and second storage devices is unrelated to values of the flag if the flags for both devices have the same value is taught by Tanaka as selection from the disk drives having satisfying the condition (col. 9, lines 47-48).

As per claims 3, 12, and 21, Tanaka discloses synchronizing (time) the data set on both first and second storage devices (col. 8, lines 44-47)

As per claims 4, 13, 22, applicants' claimed flag is maintained for each data set in the first and second storage devices and wherein the first and second storage devices have the same data sets taught by Tanaka as multiple identical data store in a plurality of storage units (col. 2 lines 26-29).

As per claims 5, 14, 23, applicant's claimed step the data set from one of a third and fourth storage devices if the data set is in one of the third and fourth storage devices, wherein the steps of selecting one of the first and second storage devices and the data from one of the first and second storage devices occurs if the data set is not in one of the third and fourth storage devices is taught by Tanaka at col. 13, lines 51-56 et seq. Tanaka further teaches the data set from the first storage device to the third storage device when data set from the first storage device taught by Tanaka at col. 13, lines 51-56 et seq. Further the claimed step data set from the second storage device to the fourth storage device from the first storage device taught by Tanaka at col. 13, lines 51-56 et seq.

As per claims 6, 15, and 24, scheduling write operation to copy data from the third storage device to first storage device taught by Tanaka at col. 13, lines 51-56 et seq. The claimed step receiving a request to after scheduling the write operation the data set taught by Tanaka at col. 13, lines 48-56. Finally, recalling the data set from the third storage device,...taught by Tanaka at 13, lines 48-56.

As per claims 7, 16, and 25, first and second storage devices from which recall the data set if requested data set has been copied to the first and second storage devices,...taught by Tanaka at col. 13, lines 48-56.

As per claims 8, 17, and 26, data level is maintained for data set in both the third and fourth storage devices,... taught by Tanaka at col. 13, lines 59-62.

As per claims 9, 18, and 27, randomly selecting one of the third and fourth storage devices,...taught by Tanaka at col. 9, lines 47-48.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Ali whose telephone number is (703) 605-4356. The examiner can normally be reached on Monday to Thursday from 7:30am-6:00pm EST.

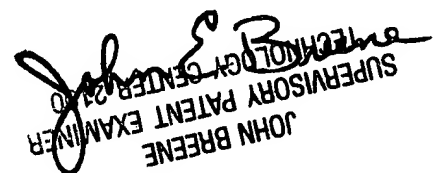
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (703) 305-9790. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

Mohammad Ali

Patent Examiner

January 02, 2003


SUPERVISORY PATENT EXAMINER
JOHN BREENE
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